

REMARKS

This paper is in response to the official action of November 3, 2006, wherein claims 1-17 were presented, the drawings were objected to under 37 CFR 1.83(a), claim 13 was objected to, claims 1-10 and 15-17 were rejected as being anticipated by Welsh et al. US 3,992,598, and claims 11-14 were rejected as being obvious over Welsh in view of von Kreisler et al. DE 27 44 901.

Reconsideration of the application as amended is solicited.

By the foregoing, claim 1 has been amended to incorporate the limitations of claim 6, which has been cancelled, and to provide preferred terminology consistent with U.S. practice. The dependencies of claims 7 and 8 have been amended in view of the cancellation of claim 6, and the dependency of claim 13 has been amended to address the objection to that claim.

The issues raised in the action will be addressed in the order appearing therein.

Drawings

The drawings have been objected to as allegedly not illustrating the counterweight comprising at least parts of the magnet components recited in claim 8. The basis of the objection is traversed, and reconsideration in view of the following remarks is solicited.

As seen in Fig. 1, the approach flow component (i.e., the flap 3) is eccentrically seated about a pivot axis 6, and has a larger surface area than portion bearing the permanent magnet 4 on the opposite side of the pivot axis. See page 7, lines 16-27 of the specification, with reference to Fig. 1. As described in that portion of the specification, the magnet component 4, which has a substantial mass, can function as at least part of the counterweight for the flap 3, since the mounting of the flap 3 depends on the mass of the magnet. The simple fact is recited in claim 8, and thus it is submitted that the element recited in claim 8 is amply shown in the drawings.

Claim Objections

Claim 13 has been objected to as reciting a "reed-contact switch" without providing sufficient antecedent basis. The examiner noted that claim 13 depended from claim 2, which does not recite the reed-contact switch.

In response, claim 13 has been amended to depend from claim 10, which in turn depends from claim 9 wherein antecedent basis is amply provided.

Claim Rejections - 35 USC §102

Claim 1-10 and 15-17 have been rejected as anticipated by Welsh et al. U.S. 3,992,598. Reconsideration of the claims as amended is solicited.

As understood from Welsh, an air flow velocity vane-actuated switch 11 senses the velocity of flow of a fluid in an upward direction along a flow path by disposing a vane 17 horizontally in the flow path. The vane 17 is pivotally mounted for rotational movement (when an air flow impinges the vane) in order to actuate a magnetic switch 14. Therefore, a magnet 24 which is adapted to interact with the switch 14 is provided on the vane 17. A weight 21 (also 41) for providing an imbalance in torque in the vane in opposition to the torque induced by impact of fluid on the surface of the vane is attached to the vane. When the velocity of air flow reaches a value sufficient to counteract the torque induced by the weight 21, the magnet 24 is displaced so as to remove its influence from the switch 14. When the velocity of air flow is too small to counteract the torque induced by the weight 21, the vane moves back into the starting position. The movement of the vane back to the starting position (due to clockwise torque generated by the weight 21) will be stopped by a member 26 on the vane 17.

Therefore, the rotation of the vane is induced by the influence of the air flow impinging on the upstream side of vane. The weight is placed on the downstream side relative to the air flow and allows for moving back the vane (see column 1, line 54 to 60 and description of the drawings).

In Welsh, monitoring an air flow will be carried out by using gravity. The weights 21, 41 provided on the vane 17 are used for moving back the vane, since the weights

generate a torque to counteract the torque generated when an air flow impinges the vane. If the vane will be moved back to the starting position, the movement has to be stopped by means of a member 26.

The device as disclosed in Welsh is not comparable to the subject matter of the invention. With the device in accordance with Welsh, an interaction between a magnetic switch (reed contact) and magnetic elements is not usable in order to move the vane back to the starting position and to retain the vane in this position. A mass-compensating element is not provided with the device of Welsh, but merely a weight for generating a "moving back torque." The "moving back weight" is not comparable to a mass-compensating element, since the vane in accordance with the device of Welsh would continue to move even when it has reached the starting position (therefore, the stop member 26 is provided). Incidentally, the device of Welsh is useable only within a cooling system with an air flow directed from bottom to the top. Since no mass-compensating element is provided a wrong installation of the device within the cooling system would lead to undependable detection results. Since a stopping member 26 is necessary, it is furthermore not possible with the device of Welsh to detect an air flow which flows in a contrary direction (for example from the top to the bottom).

Without a stop member, the vane could move in a position which depends on the mounting position of the device and which would not allow for a correct operation of the device (fluid flow switch 11). The vane will be adjusted by means of a weight (which is not a mass-compensating counterweight in accordance with the invention) and a stop member. Therefore, the vane is not being installed regardless of the force of gravity and of its position.

In contrast, the subject matter of the invention permits the approach-flow component moving back to the starting position due to interaction between a magnetic switch (reed contact) and a magnetic element (magnet components) and the bedding (storage) of the approach-flow component regardless of the force of gravity and of its position. Stopping members or "moving back weights" are not necessary since the system adjusts itself in the starting position when no or only a marginal air flow is present.

With respect to claim 6, the weight 21 of the Welsh claim is not comparable with the counterweight in accordance with the subject-matter of the invention.

For the foregoing reasons, it is submitted that Welsh does not disclose each and every element of the rejected claims, and that the rejection should therefore be withdrawn. Such action is solicited.

Claim Rejections - 35 USC §103

Claims 11-14 have been rejected as obvious over Welsh in view of von Kreisler et al. DE 27 44 901. This rejection is also traversed. Reconsideration is requested.

DE 27 44 901 discloses a device for monitoring the flow rate or the level of a fluid within conduits. A lever 21 provides on a first end a baffle plate 24 which is in contact with the fluid. A second end of the lever is provided with a magnet 26 which interacts with a magnet 28 disposed at a housing of the device. The lever will be retained at the housing due to the magnetic force. Once the flow of the fluid reaches a value which allows for moving the lever against the magnetic force, the lever will actuate a magnetic switch 31 with the magnet 26 in order to activate for example an alarm. Lever will be moved back due to the magnetic force between magnet 26 and magnet 28 (see Fig. 1 and e. g. page 8, line 3 to 24).

In DE 27 44 901 a second magnetic element 28 has to be provided in order to retain the lever in the starting position (the housing wall being used as a stopper) and to move the lever back when not arranged in the starting position. Additional magnetic elements or a stopper element are not necessary with the subject-matter of the invention.

Both Welsh and von Kreisler are silent as to an approach-flow component with at least one counterweight (or similar mass-compensating element), so that it can be installed regardless of the force of gravity and of its position, as recited in claim 1. Furthermore, the documents do not disclose that the magnetic field (between switch and the magnet provided on the vane) forms at least part of the retaining force. Therefore, it appears, that the structure and function of the device for monitoring an air supply flow or a volumetric air flow according to the subject-matter of the invention is neither anticipated by nor obvious from that prior art represented by the documents as below-mentioned.

For the foregoing reasons, it is submitted that the claims as amended are not obvious in view of Welsh taken in view of von Kreisler and allowance of all claims is solicited.

Should the examiner wish to discuss the foregoing or any matter of form in an effort to advance this application toward allowance, he is urged to telephone the undersigned at the indicated number.

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Respectfully submitted,

By 

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